



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,401	03/31/2004	Richard R. Hollowbush	1121-73 (D4781-00078)	5381
8933	7590	01/28/2008	EXAMINER	
DUANE MORRIS, LLP			CHOW, JEFFREY J	
IP DEPARTMENT				
30 SOUTH 17TH STREET			ART UNIT	
PHILADELPHIA, PA 19103-4196			PAPER NUMBER	
			3628	
			MAIL DATE	
			DELIVERY MODE	
			01/28/2008	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/814,401

Applicant(s)

HOLLOWBUSH ET AL.

Examiner

Jeffrey J. Chow

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 November 2007 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 3 – 6, filed 29 November 2007, have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding claims 1, 7 – 14, filed 29 November 2007, have been fully considered but they are not persuasive.

Applicant argues that Krishnamurthy et al. (US 5,469,188) does not teach changing of display modes, however the claimed invention mentions changing of modes. Arguments made by the applicant credit the claimed invention to teach changing of display modes, however the claimed invention requires something the display of images is changed between modes. Examiner notes that modes are not defined and a reasonable interpretation is given to modes. Krishnamurthy teaches artist selects one of several pre-analysis functions to analyze the image (column 3, lines 7 – 15), which shows an artist can select different modes based on the pre-analysis functions. Krishnamurthy discloses automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit

Art Unit: 2628

(column 4, lines 8 – 11), which reads on another mode. Krishnamurthy discloses for all values of pixels that exceed the IRE level set by the level 44, a selected color, such as magenta, is displayed in the error image window as a modulation of the portions 46 of the image that exceed the level (column 3, lines 41 – 50), which reads on another mode. These modes change the display of the images in Krishnamurthy's system and reads on the claimed invention. Applicant argues what a mode is in the present invention (page 7), however, a reasonable interpretation of "a repetitively composed formatted display of images that is changed between modes" is any mode that changes the presentation of the display as explained above.

Applicant argues Krishnamurthy only deals with one image at a time (page 9). The claimed invention recites, "the video input signal including at least one of successive picture frames and fields containing a video picture". Krishnamurthy teaches the video file can be stored on the computer system 10, in the frame buffer of the DSP 20, and in the video recorder 22 and the computer system 10 is coupled to a digital processing system (DPS) 20 that includes at least one frame buffer that contains one full frame of the digital component image (column 2, lines 52 – 67).

Applicant argues Krishnamurthy deals with static form and does not teach changing modes of display when the character of a video signal of successive frames and fields meets a preset criteria and associated controller changes the current display mode as a result of that (page 9). As stated above, the claimed invention recites "changed between modes" not changing the mode of display. However, obvious modifications can be applied to Krishnamurthy's system to have non-static windows..

Applicant argues the combination of Krishnamurthy, McVeigh et al. (US 2002/0141615) and McCalla et al. (US 2004/0031061) would be possible to reconstituting frame based static editors and analyzers as video processors that changes modes on the fly in response to change in character of the passing video signal (page 11). Krishnamurthy discloses automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit (column 4, lines 8 – 11). McVeigh disclose automatically tracking a color object through a series of frames of data (claim 11). The combination teaches a tracking of errors and to display the frame with error. The system analyzes a video and real time and stop at each frame that has an error that exceeds a threshold and a user can press the "next" or "prev" buttons to go to the next or previous error, respectively, further analyzing the rest of the video. The combination analyzes the video on a fly, but to the point where the video does not stop to allow users to make decisions on the frame at hand.

The 35 U.S.C. 112 rejection have been withdrawn due to applicant's amendments.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the character of the input signal" in lines 33 and 34. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2628

Claim 1 recites the limitation "the nature of information displayed" in the last paragraph. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "said changeable selection" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3 – 8, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Krishnamurthy et al. (US 5,469,188).

Regarding independent claim 1, Krishnamurthy teaches an apparatus for use in analyzing video images, comprising a video input signal providing a video signal to be analyzed, the video input signal including at least one of successive picture frames and fields containing a video picture (column 2, lines 52 – 67 and Figure 1: the video file can be stored on the computer system 10, in the frame buffer of the DSP 20, and in the video recorder 22 and the computer system 10 is coupled to a digital processing system (DPS) 20 that includes at least one frame buffer that contains one full frame of the digital component image), a video processor operable to produce a display of information on a display device at least partly from the video input signal (column 2, lines 52 – 67 and Figure 1: the DPS 20 is coupled to a video recorder 22 together with an associated component video monitor 24), wherein the display of information comprises a

Art Unit: 2628

repetitively composed formatted display of images (column 3, lines 7 – 15: video signals) that is changed between modes (column 3, lines 7 – 15: artist selects one of several pre-analysis functions to analyze the image; column 4, lines 8 – 11: automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit; column 3, lines 41 – 50: for all values of pixels that exceed the IRE level set by the level 44, a selected color, such as magenta, is displayed in the error image window as a modulation of the portions 46 of the image that exceed the level; these options express different modes and changes the formatted display by mere presentation), in which the formatted display contains one of a full representation of the video picture contained in the video input signal selectively presented so as to occupy at least a portion of a display area of the formatted display (column 3, lines 16 - 19 and Figure 2: a display window 32 of panel display 30), a zoom image including an area of particular scrutiny in said video picture selectively presented so as to occupy at least a portion of the display area of the formatted display (column 3, lines 21 - 31 and Figure 2: the display window 32 are status windows 37 that indicate the digital component values (YBR) of the pixel and includes pixel swatches of the pixel including the immediately preceding and following pixels on the same horizontal line), a report of the video data characteristics of at least one point within the area of particular scrutiny (column 3, lines 21 – 31 and Figure 2: status windows 37 that display various characteristics of the pixels), a subset of said full representation, said zoom image and said report (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37), wherein controller coupled to the video processor and to at least one control input (column 2, lines 52 – 67 and Figure 1: a computer system 10 that has a central processor 12, a display 14 and an interface 16, such as a keyboard and mouse),

Art Unit: 2628

controls the nature of information displayed by the video processor in response to changes in the character of the input signal, including changing between said modes (column 3, lines 7 – 15: artist selects one of several pre-analysis functions to analyze the image; column 4, lines 8 – 11: automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit; column 3, lines 41 – 50: for all values of pixels that exceed the IRE level set by the level 44, a selected color, such as magenta, is displayed in the error image window as a modulation of the portions 46 of the image that exceed the level; these options express different modes and changes the formatted display by mere presentation).

Regarding dependent claim 3, Krishnamurthy teaches video processor has a display mode wherein the full representation of the video picture, the zoom image and the report of said video data characteristics are presented at different parts of the display device and present progressively smaller parts of the area of particular scrutiny (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37 are displayed at different areas, the zoomed area of particular scrutiny shows a smaller area of the status window 37 and the status window 37 shows further details of the zoomed area of particular scrutiny).

Regarding dependent claim 4, Krishnamurthy discloses the information of the pixel displayed in the selectable status window 37 (Figure 2), which reads on the claimed tabular display, which in the disclosure of the disclosed invention the tabular display just shows information of the pixel data.



Regarding dependent claim 5, Krishnamurthy further discloses the selectable status window 37 that indicate the (X,Y) pixel location (POS) of the cursor 36 (column 3, lines 21 – 30 and Figure 2), which relates to the claimed sample location information and color sample data.

Regarding dependent claim 6, Krishnamurthy discloses the pixel swatches in the selectable status window 37 (column 3, lines 21 - 31 and Figure 2), which reads on the claimed color swatch of the color sample data.

Regarding dependent claim 7, Krishnamurthy further discloses a digital component domain image is stored in the frame buffer of the DPS 20 (column 2, lines 61 – 63) and errors are displayed in respective windows for each test and a NEXT or PREV button moves the cursor 36 to the next or previous pixel that exhibited an error of the selected type (column 3, lines 36 – 40). The frame buffer of the DPS 20 relates to the claimed digital video signal. It is inherent that a digitized video signal increments at least one frame at a time and that each frame contains at least one of discrete sample data and discrete color state elements defining pixels, which reads on the claimed video input signal contains a digital video signal with successive picture frames and the video processor produces the formatted display repetitively for increments of at least one frame, from one of discrete sample data and discrete color state elements defining pixels in the video input signal.

Regarding dependent claim 8, Krishnamurthy discloses the video recorder 22, which relates to the claimed video sampler. The video recorder 22 is operable to produce a digitized video signal. It is inherent that a digitized video signal increments at least one frame at a time and that each frame contains at least one of discrete sample data and discrete color state elements defining pixels and Krishnamurthy discloses errors are displayed in respective windows for each

Art Unit: 2628

test and a NEXT or PREV button moves the cursor 36 to the next or previous pixel that exhibited an error of the selected type (column 3, lines 36 – 40), which reads on the claimed video processor produces the formatted display for increments of at least one frame from one of discrete sample data and discrete color state elements defining pixels in the video input signal.

Regarding dependent claim 12, Krishnamurthy teaches the video processor is operable responsive to the control input to define the predetermined criteria upon which the video processor is operable automatically to change the area of particular scrutiny and to select said changeable selection of the formatted display (column 4, lines 8 – 11: an automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit; column 4, lines 15 – 23: the artist selects the saturation module).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of Lau et al. (US 6,525,746).

Regarding dependent claim 9, Krishnamurthy did not expressly disclose the video processor is operable to resize at least part of the video picture for presentation in part of an area of the formatted display that occupies less than a full area of the formatted display, and wherein

Art Unit: 2628

resizing by the video processor includes at least one of recalculating pixel values, sampling pixel values and reading out selected pixel values. Lau discloses various display windows 54-62, a main window 50, within which a user selects one or more subordinate windows 52, each of which may be concurrently active at a given time (column 7, lines 28 – 33 and Figure 3). Lau also discloses the subordinate windows 52 may be opened or closed, moved or resized (column 7, lines 33 – 34 and Figure 3). Lau also discloses the subordinate windows 52, comprises of a video window 54, a zoom window 56, and one or more data windows 62 (column 7, lines 40 – 43 and Figure 3). It would have also been obvious to one of ordinary skills in the art at the time of the invention to modify Krishnamurthy's system to allow the display window, the status window, and the zoom window to be opened, closed, resized and moved or selectively displayed. One would be motivated to do so because this would give the user increased flexibility in viewing the desired information on a display.

Regarding dependent claim 11, Krishnamurthy did not expressly disclose video processor allots the formatted display to accommodate said changeable selection. Lau discloses various display windows 54-62, a main window 50, within which a user selects one or more subordinate windows 52, each of which may be concurrently active at a given time (column 7, lines 28 – 33 and Figure 3). Lau also discloses the subordinate windows 52 may be opened or closed, moved or resized (column 7, lines 33 – 34 and Figure 3). Lau also discloses the subordinate windows 52, comprises of a video window 54, a zoom window 56, and one or more data windows 62 (column 7, lines 40 – 43 and Figure 3). It would have also been obvious to one of ordinary skills in the art at the time of the invention to modify Krishnamurthy's system to allow the display window, the status window, and the zoom window to be opened, closed, resized and moved or

Art Unit: 2628

selectively displayed. One would be motivated to do so because this would give the user increased flexibility in viewing the desired information on a display.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of Yanker (US 5,187,776).

Regarding dependent claim 10, Krishnamurthy did not expressly disclose the control input is operable by a user manually to select from the video input signal an area to be the area of particular scrutiny. Yanker discloses the cursor 16 of the enlarged image and the cursor 14 of the viewport 12 moves in unison (column 4, lines 23 - 27). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system to incorporate user input to manually select an area of scrutiny. One would be motivated to do so because this allow users to make self-careful analysis of the video that may not be desirable by the users, but not detectable by the computer. Krishnamurthy teaches the video processor is operable simultaneously to present the video picture and the zoom image including the area of particular scrutiny, in different areas of said formatted display (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37 are displayed at different areas).

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of McVeigh et al. (US 2002/0141615) and McCalla et al. (US 2004/0031061).

Regarding dependent claim 13, Krishnamurthy did not expressly disclose the controller and the video processor are operable to coordinate between automatic and manual selection of the area of particular scrutiny, wherein one of said manual selection and said automatic selection supersedes an other of said manual selection and said automatic selection for a limited period of time after said changing of the formatted display by the video processor when the predetermined criteria are met, however Krishnamurthy does disclose a pre-analysis of video signals obtained from a digital image that provides an artist in the preparation of animation sequences with an indication of color distortion errors so that the artist can correct such errors interactively during the animation process (column 2, lines 1 – 5) and automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit (column 4, lines 8 – 11). McVeigh disclose automatically tracking a color object through a series of frames of data (claim 11). McCalla discloses after predetermined time period where there is no user input, automatically display plurality of information items (claim 3). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system to incorporate McVeigh's system of automatically tracking colored object in a video sequence by automatically tracking color errors in a video sequence and to also incorporate the principles of McCalla's system of automatically resuming the original process after a certain amount of time has elapsed without any user interaction by automatically tracking errors after a certain amount of time has elapsed without any user interaction. One would be motivated to automatically track color errors in a video sequence because this would allow users to interactively view errors in real time while the video is being analyzed and one would be motivated to resume tracking errors after an elapsed time of no user interaction because this

Art Unit: 2628

would allow users correcting errors to view the errors long enough to determine if it is desirable to correct these errors.

Regarding dependent claim 14, Krishnamurthy discloses an amplitude check in where each color component of each pixel in the RGB domain is checked to determine whether the value is within predetermined limits (column 3, line 50 – column 4, line 14), which reads on the claimed selection criteria for said automatic selection include a color gamut value criterion having at least one threshold value such that a value meeting the threshold value criterion is selected for particular scrutiny.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJC

  
ULKA CHAUHAN  
SUPERVISORY PATENT EXAMINER